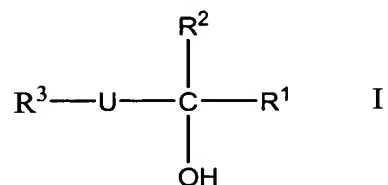


IN THE CLAIMS

1-14 (Cancelled):

15 (Currently Amended): A process for the preparation of a compound of the general formula I by subjecting a compound of general formula V to an electrochemical reaction in an electrolysis liquid with an alcohol of the general formula II in the presence of an auxiliary electrolyte and catalytic amounts of at least one metal salt (S) derived from a metal from subgroups (groups) Ib (11), IIb (12), VIb (6), or VIIIb (8, 9, 10) of the periodic chart or from lead, tin or rhenium,

wherein the compound of general formula I is:



where  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^3$  are each independently hydrogen,  $\text{C}_1$ - to  $\text{C}_{20}$ -alkyl,  $\text{C}_2$ - to  $\text{C}_{20}$ -alkenyl,  $\text{C}_2$ - to  $\text{C}_{20}$ -alkynyl,  $\text{C}_3$ - to  $\text{C}_{12}$ -cycloalkyl,  $\text{C}_4$ - to  $\text{C}_{20}$ -cycloalkyl-alkyl,  $\text{C}_1$ - to  $\text{C}_{20}$ -hydroxyalkyl, or aryl or  $\text{C}_7$ - to  $\text{C}_{20}$ -arylalkyl which is unsubstituted or substituted by  $\text{C}_1$ - to  $\text{C}_8$ -alkyl,  $\text{C}_1$ - to  $\text{C}_8$ -alkoxy, halogen,  $\text{C}_1$ - to  $\text{C}_4$ -haloalkyl,  $\text{C}_1$ - to  $\text{C}_4$ -haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl,  $\text{C}_2$ - to  $\text{C}_8$ -alkoxycarbonyl or cyano, or

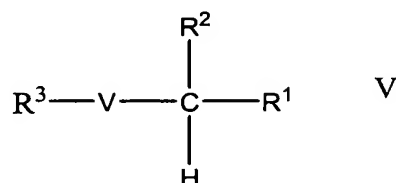
$\text{R}^1$  and  $\text{R}^2$  together are a  $\text{C}_2$ - to  $\text{C}_9$ -alkandiyl unit which is unsubstituted, monosubstituted or disubstituted by  $\text{C}_1$ - to  $\text{C}_8$ -alkyl,  $\text{C}_1$ - to  $\text{C}_8$ -alkoxy and/or halogen and in which one or two methyl groups may also be replaced by a  $(\text{CH}=\text{CH})$  unit and  $\text{R}^3$  is additionally an acetalated carbonyl group in which the alkoxy group is derived from an alcohol of the general formula II:



where  $R^4$  is  $C_1$ - to  $C_6$ -alkyl, and

U is an acetalated carbonyl group in which the alkoxy group is derived from an alcohol of the general formula II; and

wherein the compound of general formula V is:



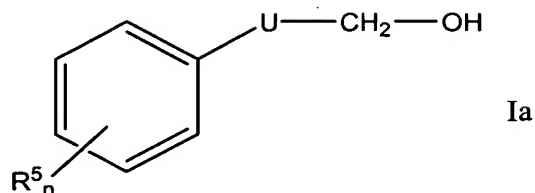
wherein:

V is a carbonyl group, or an acetalated carbonyl group having  $C_1$ - to  $C_6$ -alkoxy,

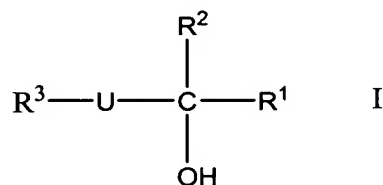
$R^1$ ,  $R^2$  and  $R^3$  are each independently hydrogen,  $C_1$ - to  $C_{20}$ -alkyl,  $C_2$ - to  $C_{20}$ -alkenyl,  $C_2$ - to  $C_{20}$ -alkynyl,  $C_3$ - to  $C_{12}$ -cycloalkyl,  $C_4$ - to  $C_{20}$ -cycloalkyl-alkyl,  $C_1$ - to  $C_{20}$ -hydroxyalkyl, or aryl or  $C_7$ - to  $C_{20}$ -arylalkyl which is unsubstituted or substituted by  $C_1$ - to  $C_8$ -alkyl,  $C_1$ - to  $C_8$ -alkoxy, halogen,  $C_1$ - to  $C_4$ -haloalkyl,  $C_1$ - to  $C_4$ -haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl,  $C_2$ - to  $C_8$ -alkoxycarbonyl or cyano, or

$R^1$  and  $R^2$  together are a  $C_2$ - to  $C_9$ -alkandiyl unit which is unsubstituted, monosubstituted or disubstituted by  $C_1$ - to  $C_8$ -alkyl,  $C_1$ - to  $C_8$ -alkoxy and/or halogen and in which one or two methyl groups may also be replaced by a (CH=CH) unit and  $R^3$  is additionally an acetalated carbonyl group having  $C_1$ - to  $C_6$ -alkoxy.

16 (Previously Presented): The process of Claim 15 for the preparation of a compound of the general formula Ia:



where U is as defined under the formula I,



n is 0, 1, 2 or 3, and

R<sup>5</sup> is C<sub>1</sub>- to C<sub>8</sub>-alkyl, C<sub>1</sub>- to C<sub>8</sub>-alkoxy, halogen, C<sub>1</sub>- to C<sub>4</sub>-haloalkyl, C<sub>1</sub>- to C<sub>4</sub>-haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C<sub>2</sub>- to C<sub>8</sub>-alkoxycarbonyl or cyano.

17 (Previously Presented): The process of Claim 16, where the compound of the general formula Ia is 2-phenyl-2,2-dimethoxyethanol.

18 (Currently Amended): The process of Claim 15, where the compound of the general formula I is a compound of the general formula Ib:



where m is a number from 1 to 10, and R<sup>4</sup> is as defined under the formula II, and the compound of the general formula V is a compound of the general formula Vb:



19 (Currently Amended): The process of Claim 15, where the compound of the formula I is 2,2,3,3-tetramethoxypropanol, and the ~~starting~~ compound of the general formula V employed is methylglyoxal dimethyl acetal.

20 (Currently Amended): The process of Claim 15, where the anions of the metal salt (S) ~~are~~ is derived from a mineral acid.

21 (Currently Amended): The process of Claim 15, where the anions of the metal salt (S) ~~are~~ is phosphate, sulfate, nitrate, perchlorate or halide.

22 (Currently Amended): The process of Claim 15, where the cations of the metal salt (S) ~~are~~ is iron, nickel, platinum, palladium, cobalt, zinc, silver or copper.

23 (Currently Amended): The process of Claim 15, where the electrolysis liquid contains from 1 to 1,000 ppm by weight of the metal ions of the metal salt (S), based on the total amount of electrolysis liquid.

24 (Currently Amended): The process of Claim 15, where in the auxiliary electrolyte ~~is electrolysis liquid contains~~ a halogen-containing auxiliary electrolyte.

25 (Currently Amended): The process of Claim 15, where the electrolysis liquid consists essentially of:

- a ~~starting~~ compound of the general formula V,
- an alcohol of the general formula II,
- a halogen-containing auxiliary electrolyte,

a catalytic amount of the metal salt (S),  
optionally the desired products of the general formulae I,  
optionally other by-products of electrolysis which are derived from the compounds of  
the general formulae I and V, and  
optionally, other conventional co-solvents.

26 (Currently Amended): The process of Claim 15, wherein  
the proportion of the compound of general formula V ~~the starting compound(s) and  
product(s) of the general formulae I and V and of other by-products of electrolysis from the  
abovementioned compound(s)~~ is from 1 to 70% by weight,

the proportion of the alcohol of the general formula II is from 14.9 to 94.9% by  
weight,

the proportion of said auxiliary electrolyte is from 0.1 to 5% by weight, and  
the proportion of any co-solvents present is from 0 to 70% by weight  
based on the electrolysis liquid and

the proportion of product(s) of the general formulae I and V and of other by-products  
of electrolysis from the abovementioned compound(s) is from 1 to 70% by weight.

27 (Previously Presented): The process of Claim 15, wherein the electrochemical  
reaction is carried out in an undivided electrolysis cell.

28 (Previously Presented): The process of Claim 15, where the anodes employed are  
made of noble metals, noble-metal oxides, graphite or carbon materials, and the cathodes  
employed are made of iron, steel, nickel, zinc, noble metals, graphite or carbon materials.

29 (Previously Presented): A process for preparing a compound of general formula III comprising:

subjecting a compound of general formula Va to an electrochemical reaction in an electrolysis liquid with an alcohol of the general formula II in the presence of an auxiliary electrolyte and a catalytic amount of a metal salt (S) derived from a metal from sub-groups (groups) Ib (11), IIb (12), VIb (6), or VIIIb (8, 9, 10) of the periodic chart or from lead, tin or rhenium;

wherein the alcohol of general formula II is:

$R^4-OH$ , wherein  $R^4$  is  $C_{1-6}$  alkyl,

wherein the compound of general formula III is:

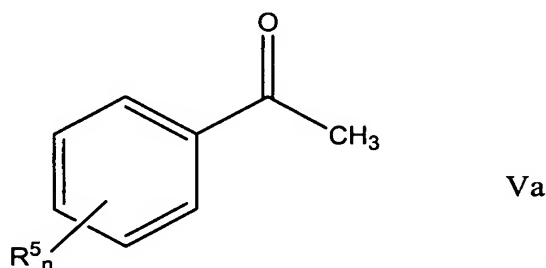
$R^3-V-W-R^1$  III

wherein  $R^1$  is hydrogen, and

$R^3$  is exclusively aryl which is unsubstituted, or substituted by  $C_1$ - to  $C_8$ -alkyl,  $C_1$ - to  $C_8$ -alkoxy, halogen,  $C_1$ - to  $C_4$ -haloalkyl,  $C_1$ - to  $C_4$ -haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl,  $C_2$ - to  $C_8$ -alkoxycarbonyl or cyano; and

V and W are independently a carbonyl group, or an acetalated carbonyl group having  $C_1$ - to  $C_6$ -alkoxy, with the proviso that one of the groups V and W is a carbonyl group and the other is an acetalated carbonyl group; and

wherein the compound of general formula Va is:

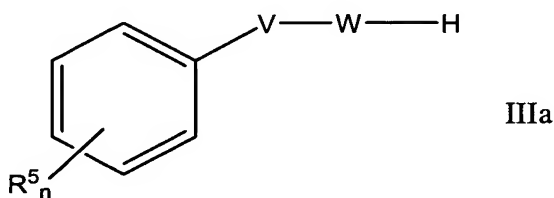


wherein:

$R^5$  is  $C_1$ - to  $C_8$ -alkyl,  $C_1$ - to  $C_8$ -alkoxy, halogen,  $C_1$ - to  $C_4$ -haloalkyl,  $C_1$ - to  $C_4$ -haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl,  $C_2$ - to  $C_8$ -alkoxycarbonyl or cyano, and

$n$  is 0, 1, 2 or 3.

30 (Previously Presented): The process of Claim 29, wherein a compound of general formula IIIa:



is prepared.

31 (Previously Presented): The process of Claim 30, where the compound of general formula IIIa is 2-phenyl-2,2-dimethoxyacetaldehyde or 2-phenylglyoxal dimethyl acetal.

32 (Currently Amended): The process of Claim 29, where the anions of the metal salt (S) ~~are~~ is derived from a mineral acid.

33 (Currently Amended): The process of Claim 29, where the anions of the metal salt (S) ~~are~~ is phosphate, sulfate, nitrate, perchlorate or halide.

34 (Currently Amended): The process of Claim 29, where the cations of the metal salt (S) ~~are~~ is iron, nickel, platinum, palladium, cobalt, zinc, silver or copper.

35 (Currently Amended): The process of Claim 29, where the electrolysis liquid contains from 1 to 1,000 ppm by weight of the metal ions of the metal salt (S), based on the total amount of electrolysis liquid.

36 (Currently Amended): The process of Claim 29, wherein the auxiliary electrolyte ~~is electrolysis liquid~~ contains a halogen-containing auxiliary electrolyte.

37 (Currently Amended): The process of Claim 29, where the electrolysis liquid consists essentially of:

a ~~starting~~ compound of general formula Va,  
an alcohol of general formula II,  
a halogen-containing the auxiliary electrolyte,  
a catalytic amount of the metal salt (S),  
optionally the ~~desired products~~ compound of general formula III,  
optionally other by-products of electrolysis which are derived from the compounds of general formulae III and V, and  
optionally, other conventional co-solvents.

38 (Currently Amended): The process of Claim 29, wherein  
the proportion of the ~~starting compound(s)~~ the compound of general formula Va and  
~~product(s) of general formulae III and V and of other by-products of electrolysis from the~~  
~~above mentioned compound(s)~~ is from 1 to 70% by weight,

the proportion of the alcohol of general formula II is from 14.9 to 94.9% by weight,  
the proportion of said auxiliary electrolyte is from 0.1 to 5% by weight, and



the proportion of any co-solvents present is from 0 to 70% by weight  
based on the electrolysis liquid and  
the proportion of the product(s) of general formulae III and V and of other by-  
products of electrolysis from the above mentioned compound(s) is from 1 to 70% by weight.

39 (Previously Presented): The process of Claim 29, wherein the electrochemical reaction is carried out in an undivided electrolysis cell.

40 (Previously Presented): The process of Claim 29, where the anodes employed are made of noble metals, noble-metal oxides, graphite or carbon materials, and the cathodes employed are made of iron, steel, nickel, zinc, noble metals, graphite or carbon materials.

41 (Currently Amended): A process for preparing a compound of general formula IV comprising:

subjecting a compound of general formula Vb to an electrochemical reaction in an electrolysis liquid with an alcohol of general formula II in the presence of an auxiliary electrolyte and a catalytic amount of at least one metal salt (S) derived from a metal from sub-groups (groups) Ib (11), IIb (12), VIb (6), or VIIIb (8, 9, 10) of the periodic chart or from lead, tin or rhenium;

wherein the alcohol of general formula II is:

$R^4$ -OH, wherein  $R^4$  is  $C_{1-6}$  alkyl,

wherein the compound of general formula IV is:



wherein:

$R^3$  is exclusively aryl which is unsubstituted, or substituted by  $C_1$ - to  $C_8$ -alkyl,  $C_1$ - to  $C_8$ -alkoxy, halogen,  $C_1$ - to  $C_4$ -haloalkyl,  $C_1$ - to  $C_4$ -haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl,  $C_2$ - to  $C_8$ -alkoxycarbonyl or cyano;

$R^4$  is  $C_1$ - to  $C_6$ -alkyl; and

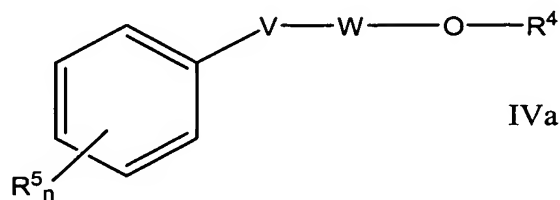
V and W are independently a carbonyl group, or an acetalated carbonyl group having  $C_1$ - to  $C_6$ -alkoxy, with the proviso that one of the groups V and W is a carbonyl group and the other is an ~~acetylated~~ acetalated carbonyl group;

wherein the compound of general formula Vb is:



wherein m is 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10.

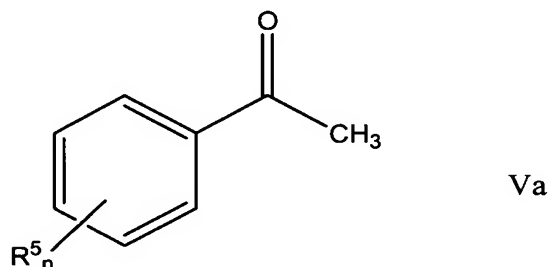
42 (Currently Amended): A process for the preparation of a compound of general formula IVa:



comprising:

subjecting a compound of general formula Va to an electrochemical reaction in an electrolysis liquid with an alcohol of general formula II in the presence of an auxiliary electrolyte and a catalytic amount of at least one metal salt (S) derived from a metal from sub-groups (groups) Ib (11), IIb (12), VIb (6), or VIIIb (8, 9, 10) of the periodic chart or from lead, tin or rhenium;

wherein formula Va is:



where in formulae IVa and Va,

n is 0, 1, 2 or 3 and

R<sup>5</sup> is C<sub>1</sub>- to C<sub>8</sub>-alkyl, C<sub>1</sub>- to C<sub>8</sub>-alkoxy, halogen, C<sub>1</sub>- to C<sub>4</sub>-haloalkyl, C<sub>1</sub>- to C<sub>4</sub>-haloalkoxy, phenyl, phenoxy, halophenyl, halophenoxy, carboxyl, C<sub>2</sub>- to C<sub>8</sub>-alkoxycarbonyl or cyano; and

in formula IVa:

V and W are independently a carbonyl group, or an acetalated carbonyl group having C<sub>1</sub>- to C<sub>6</sub>-alkoxy, with the proviso that one of the groups V and W is a carbonyl group and the other is an acetalated carbonyl group; and

R<sup>4</sup> is C<sub>1-6</sub> alkyl,

wherein formula II is:

R<sup>4</sup>-OH II

43 (Previously Presented): The process of Claim 42, where the compound of the general formula IVa is phenylglyoxylic acid methyl orthoester, and the compound of the general formula Va is acetophenone.

44 (Currently Amended): The process of Claim 41, where the anions of the metal salt (S) ~~are~~ is derived from a mineral acid.

45 (Currently Amended): The process of Claim 41, where the anions of the metal salt (S) ~~are~~ is phosphate, sulfate, nitrate, perchlorate or halide.

46 (Currently Amended): The process of Claim 41, where the cations of the metal salt (S) ~~are~~ is iron, nickel, platinum, palladium, cobalt, zinc, silver or copper.

47 (Currently Amended): The process of Claim 41, where the electrolysis liquid contains from 1 to 1,000 ppm by weight of the metal ions of the metal salt (S), based on the total amount of electrolysis liquid.

48 (Currently Amended): The process of Claim 41, wherein the auxiliary electrolyte ~~is electrolysis liquid contains~~ a halogen-containing auxiliary electrolyte.

49 (Currently Amended): The process of Claim 41, where the electrolysis liquid consists essentially of:

a ~~starting~~ compound of general formula Vb,  
an alcohol of general formula II,  
a halogen-containing auxiliary electrolyte,  
a catalytic amount of the metal salt (S),  
optionally the ~~desired products~~ compound of general formula IV,  
optionally other by-products of electrolysis which are derived from the compounds of the general formulae IV and Vb, and  
optionally, other conventional co-solvents.

50 (Currently Amended): The process of Claim 41, wherein  
the proportion of the ~~starting compound(s)~~ the compound of the general formula Vb  
~~and product(s) of the general formulae IV and Vb and of other by-products of electrolysis~~  
~~from the above mentioned compound(s)~~ is from 1 to 70% by weight,

the proportion of the alcohol of general formula II is from 14.9 to 94.9% by weight,  
the proportion of the auxiliary electrolyte is from 0.1 to 5% by weight, and  
the proportion of any co-solvents present is from 0 to 70% by weight  
based on the electrolysis liquid and

the proportion of the product(s) of the general formulae IV and Vb and of other by-products of electrolysis from the above mentioned compound(s) is from 1 to 70% by weight.

51 (Previously Presented): The process of Claim 41, wherein the electrochemical reaction is carried out in an undivided electrolysis cell.

52 (Previously Presented): The process of Claim 41, where the anodes employed are made of noble metals, noble-metal oxides, graphite or carbon materials, and the cathodes employed are made of iron, steel, nickel, zinc, noble metals, graphite or carbon materials.